TOM ROSTER'S 2016 NONTOXIC SHOT LETHALITY TABLE©

Proven Nontoxic Loads For Waterfowl, Doves, & Upland Game Birds[1] *Vel. Range Tested: 1,225 – 1,700 FPS* ACTIVITY	Observed Hunters' Typical Shooting Range During Activity (Yards)	Most Effective Nontoxic Shot Size(s) For Birds Listed Under ACTIVITY At The Distances Listed In The Second Column	Minimum Load Weight (Ounces)	Minimum Pellet Hits Needed on Lethal Areas for Clean Kills	Minimum Pattern Count Needed at Any Distance for Clean Kills (# of Pellets in 30" Circle)	Most Effective Choke(s) at Distance (Given in Lead Shot Choke Designations)
Large Geese At Long Range	50-65	Steel BBB to T	1-1/4	1-2	50-55	Improved Modified
Giant, Western, Atlantic and Interior Canadas	50-70	HEVI-Shot 2 to B	1-1/2	1-2	50-55	Improved Modified, Full
Large Geese Over Decoys	35-50	Steel BB to BBB	1-1/4	1-2	50-55	Improved Cylinder, Modified
	35-50	HEVI-Shot 2 to B	1-1/2	1-2	50-55	Improved Cylinder, Modified
Medium/Small Geese Long Range	50-65	Steel BB to BBB	1-1/4	1-2	60-65	Improved Modified
Snow, White-fronted, Lesser Canadas	50-65	HEVI-Shot 2	1-1/2	1-2	60-65	Improved Modified, Full
Medium/Small Geese Over Decoys	35-50	Steel 2 to BB	1-1/8	1-2	60-65	Light Modified, Modified
	35-50	HEVI-Shot 4 to 2	1-1/4	1-2	60-65	Improved Cylinder, Modified
Large Ducks At Long Range	45-65	Steel 2 to 1	1-1/8	1-2	85-90	Improved Modified, Full
Mallard, Black, Pintail, Goldeneye, Gadwall	45-65	HEVI-Shot 4	1-1/4	1-2	85-90	Improved Modified, Full
Large Ducks Over Decoys	20-45	Steel 6 to 2	¾ - 1	1-2	85-90	I.C. (20-35 Yds), Mod. (35-45 Yds)
	20-45	HEVI-Shot 6 to 4	1-1/8	1-2	85-90	I.C. (20-35 Yds), Mod. (35-45 Yds)
Medium Ducks Over Decoys	20-45	Steel 6 to 3	1	1-2	115-120	I.C. (20-35 Yds), Mod. (35-45 Yds)
Wigeon, Scaup, Shoveler	20-45	HEVI-Shot 6 to 4	1-1/8	1-2	115-120	I.C. (20-35 Yds), Mod. (35-45 Yds)
Small Ducks Over Decoys	20-45	Steel 6 to 4	1	1-2	135-145	Mod. (20-35 Yds), Full (35-45 Yds)
Teal, Ruddy, Bufflehead	20-45	HEVI-Shot 6	1-1/8	1-2	135-145	Mod. (20-35 Yds), Full (35-45 Yds)
Ring-Necked Pheasants	20-50	Steel 3 to 2	1	2-3	90-95	I.C. (20-30 Yds), Mod. (30-50 Yds)
	20-50	HEVI-Shot 6 to 4	1-1/8	2-3	90-95	I.C. (20-30 Yds), Mod. (30-50 Yds)
Turkeys (Head and Neck Shots)	20-40	Steel 4; HEVI-Shot 6	1-1/4	3-4	210-230	Full or Extra Full
Mourning Doves	20-45	Steel 8 to 7	⅝ -¾	1-2	200-210	IC-8's/LM-7's (20-30 Yds); Mod>30 Yd
	20-45	HEVI-Shot 7½	3/4	1-2	200-210	I.C. (20-30 Yds); Light Mod (30-45 Yd)
Northern Bobwhite Quail	20-30	Steel 8 to 7	⅝ -¾	1-2	200-210	Imp. Cyl., Light Modified
Swatter Load For Wounded Birds	20-30	Steel 7 to 6	1	1	175	Improved Modified, Full

NOTE: The pellets in the steel shot loads listed in this table were traditional, highly spherical ball-shaped pellets of ~ 7.86 g/cc density and 90-95 DPH hardness. The HEVI-Shot pellets were of 12.0 g/cc density and are harder than traditional steel pellets.

This table summarizes Tom Roster's analyses to date of the lethality data bases for certain of the 16 U.S. steel vs lead waterfowl & dove shooting tests published between 1968 & 2014 & one steel-only pheasant shooting test (1999) plus lethality data bases owned by ammunition companies for birds taken with nontoxic shotshell loads Roster tested for them & the CONSEP Org.

Note: Steel #BBB (.190") & HEVI-Shot #2 (.150") have exhibited the best all-around performance for taking geese; steel #3 (.140") & HEVI-Shot #4 (.130") the best all-around performance for taking ducks; steel #2 & HEVI-Shot #4 (.130") the best all-around performance for taking ring-necked pheasants; & steel 7's (.100") the best all-around performance for taking doves.

[1]These findings are derived from testing 2¾" 28 gauge; 3" 20 ga.; 2¾", 3" & 3½" 12 ga.; & 3½" 10 ga. steel loads; plus 2¾" 28 ga.; 2¾" & 3" 20 ga.; and 2¾" & 3" 12 ga. HEVI-Shot loads.

© Copyright 2016 by Tom Roster. For answers to questions on this table contact: Tom Roster, 1190 Lynnewood, Klamath Falls, OR, USA 97601. tomroster@charter.net